INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Commissioner

100 North Senate Avenue
P. O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

May 13, 2003

Mr. Gary Calleo
R.R. Donnelley & Sons Company
1009 Sloan Street
Crawfordsville, IN 47933

Re: **107-17225**
**Second Significant** Permit Modification to
**Part 70 No.: T 107-5963-00052**

Dear Mr. Calleo:

R.R. Donnelley & Sons Company was issued Part 70 Operating Permit (T 107-5963-00052) on June 21, 2002, for a book printing and binding source. A letter requesting changes to this permit was received on February 5, 2003. Pursuant to the provisions of 326 IAC 2-7-12 a significant permit modification to this permit is hereby approved as described in the attached Technical Support Document.

The modification consists of adding one (1) heatset offset lithographic printing press located in the South Plant, identified as Press 297, and two (2) insignificant press dryers to the existing source.

The changes in the Part 70 Operating Permit are documented in the Technical Support Document. All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this modification and the following revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact CarrieAnn Paukowits, c/o OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, at 631-691-3395 ext. 18, or in Indiana at 1-800-451-6027 (ext 631-691-3395).

Sincerely,

Original signed by Paul Dubenetzky
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments
CAP/MES
cc: File - Montgomery County
Montgomery County Health Department
Air Compliance Section Inspector - Jim Thorpe
Compliance Branch - Karen Nowak
Administrative and Development - Lisa Lawrence
Technical Support and Modeling - Michele Boner

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# PART 70 OPERATING PERMIT
# OFFICE OF AIR QUALITY

## R.R. Donnelley & Sons Company
## 1009 Sloan Street
## Crawfordsville, Indiana 47933

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

| Operation Permit No.: T107-5963-00052 | |
|---|---|
| Issued by: Original Signed by Janet McCabe<br>Janet G. McCabe, Assistant Commissioner<br>Office of Air Quality | Issuance Date: June 21, 2002<br><br>Expiration Date: June 21, 2007 |

First Administrative Amendment 107-17112-00052, issued on February 4, 2003
First Significant Permit Modification 107-16731-00052, not yet issued

| Second Significant Permit Modification No.: 107-17225-00052 | Conditions Affected: A.2, D.3.1, Facility Description Box in Section D.3, and a report form is added |
|---|---|
| Issued by:Original signed by Paul Dubenetzky<br>Paul Dubenetzky, Branch Chief<br>Office of Air Quality | Issuance Date: **May 13, 2003** |

**Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]**

C.14 Emergency Reduction Plans [326 IAC 1-5-2] [326 IAC 1-5-3]
C.15 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68.215]
C.16 Compliance Response Plan -Preparation, Implementation, Records, and Reports [326 IAC 2-7-5] [326 IAC 2-7-6]
C.17 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

C.18 Emission Statement [326 IAC 2-7-5(3)(C)(iii)] [326 IAC 2-7-5(7)] [326 IAC 2-7-19(c)]
C.19 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]
C.20 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11]

**Stratospheric Ozone Protection**

C.21 Compliance with 40 CFR 82 and 326 IAC 22-1

## D.1 FACILITY OPERATION CONDITIONS - Natural Gas Fired Boilers

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

D.1.1 Particulate Matter Limitation (PM) [326 IAC 6-2-3]
D.1.2 Sulfur Dioxide ($SO_2$) [326 IAC 7-1.1-1] [326 IAC 12-1]
D.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

D.1.4 Reporting Requirements

## D.2 FACILITY OPERATION CONDITIONS - Paper Trim Cyclones and Dust Collectors

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

D.2.1 Particulate Matter (PM) [326 IAC 6-3-2]
D.2.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

**Compliance Determination Requirements**

D.2.3 Particulate Matter (PM)

**Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

D.2.4 Visible Emissions Notations

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

D.2.5 Record Keeping Requirements

## D.3 FACILITY OPERATION CONDITIONS - Printing Presses

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

D.3.1 Volatile Organic Compounds (VOC) [326 IAC 8-1-6] [326 IAC 2-7-10.5(d)(5)(A)]
D.3.2 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]
D.3.3 Clean-up Solvent VOC Emissions Control
D.3.4 VOC Emissions
D.3.5 Particulate Matter (PM) [326 IAC 6-2-3]
D.3.6 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

**Compliance Determination Requirements**

D.3.7 Particulate Matter (PM)
D.3.8 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]
D.3.9 Volatile Organic Compounds (VOC)

(1) web identified as Press 260 with a maximum line speed of 1615 feet per minute and a maximum printing width of 36 inches, with associated in-line equipment, exhausting to one (1) stack SP-5I(S).

(11) One (1) Toshiba heatset web offset lithographic printing press with four (4) units and one (1) web identified as Press 261 with a maximum line speed of 1500 feet per minute and a maximum printing width of 36 inches, with associated in-line equipment, exhausting to one (1) stack SP-5J(S).

(12) One (1) Hantscho heatset web offset lithographic printing press with one (1) unit and one (1) web identified as Press 290 with a maximum line speed of 800 feet per minute and a maximum printing width of 26 inches, with associated in-line equipment, exhausting to one (1) stack SP-5G(S).

(13) One (1) Hantscho heatset web offset lithographic printing press with four (4) units and two (2) webs identified as Press 291 with a maximum line speed of 800 feet per minute and a maximum printing width of 26 inches, with associated in-line equipment, exhausting to one (1) stack SP-5H(S).

(14) One (1) Hantscho heatset web offset lithographic printing press with four (4) units and two (2) webs identified as Press 293 with a maximum line speed of 1000 feet per minute and a maximum printing width of 33 inches, with associated in-line equipment, exhausting to one (1) stack SP-5K(S).

(15) One (1) Hantscho heatset web offset lithographic printing press with four (4) units and two (2) webs identified as Press 294 with a maximum line speed of 1076 feet per minute and a maximum printing width of 33 inches, with associated in-line equipment, exhausting to one (1) stack SP-5M(S).

(16) One (1) Hantscho heatset web offset lithographic printing press with two (2) units and two (2) webs identified as Press 295 with a maximum line speed of 1000 feet per minute and a maximum printing width of 33 inches, with associated in-line equipment, exhausting to one (1) stack SP-5P(S).

(17) One (1) Harris heatset web offset lithographic printing press with two (2) units and two (2) webs identified as Press 296 with a maximum line speed of 860 feet per minute and a maximum printing width of 31 inches, with associated in-line equipment, exhausting to one (1) stack SP-5Q(S).

(18 ) One (1) Heidelberg sheetfed offset lithographic press identified as Press 258 with a maximum line speed of 505 feet per minute and a maximum printing width of 40.5 inches including six (6) units and coater, exhausting to one (1) stack SP-5R(S) used as cooling air for electric heaters.

(19) One (1) heatset offset lithographic printing press located in the South Plant, identified as Press 297, with two webs, exhausting through stack SP-5S(S), capacity: 1,076 feet per minute.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source does not currently have any insignificant activities, as defined in 326 IAC 2-7-1 (21) that have applicable requirements.

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

**Facility Description [326 IAC 2-7-5(15)]:**

(14) One (1) Hantscho heatset web offset lithographic printing press with four (4) units and two (2) webs identified as Press 293 with a maximum line speed of 1000 feet per minute and a maximum printing width of 33 inches, with associated in-line equipment, exhausting to one (1) stack SP-5K(S).
(15) One (1) Hantscho heatset web offset lithographic printing press with four (4) units and two (2) webs identified as Press 294 with a maximum line speed of 1076 feet per minute and a maximum printing width of 33 inches, with associated in-line equipment, exhausting to one (1) stack SP-5M(S).
(16) One (1) Hantscho heatset web offset lithographic printing press with two (2) units and two (2) webs identified as Press 295 with a maximum line speed of 1000 feet per minute and a maximum printing width of 33 inches, with associated in-line equipment, exhausting to one (1) stack SP-5P(S).
(17) One (1) Harris heatset web offset lithographic printing press with two (2) units and two (2) webs identified as Press 296 with a maximum line speed of 860 feet per minute and a maximum printing width of 31 inches, with associated in-line equipment, exhausting to one (1) stack SP-5Q(S).
(18 ) One (1) Heidelberg sheetfed offset lithographic press identified as Press 258 with a maximum line speed of 505 feet per minute and a maximum printing width of 40.5 inches including six (6) units and coater, exhausting to one (1) stack SP-5R(S) used as cooling air for electric heaters.
(19) One (1) heatset offset lithographic printing press located in the South Plant, identified as Press 297, with two webs, exhausting through stack SP-5S(S), capacity: 1,076 feet per minute.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

**Emission Limitations and Standards [326 IAC 2-7-5(1)]**

D.3.1 Volatile Organic Compounds (VOCs) [326 IAC 8-1-6] [326 IAC 2-7-10.5(d)(5)(A)]

(a) The VOC content delivered to the applicator of each press shall be limited such that VOC emitted is less than twenty-five (25) tons per twelve (12) consecutive month period. Therefore, the best available control technology (BACT) requirement in 326 IAC 8-1-6 (New Facilities: General Reduction Requirements) does not apply. VOC emitted will be based on the following equation:

VOC emissions (tpy)= (ink usage X volatile content X 80% flash off )+ (fountain solution usage X volatile content X 100% flash off) + (cleaner usage X volatile content X 50% flash off )

The following presses shall be limited:

Press 240, Press 241, Press 245, Press 289, Press 238, Press 239, Press 260, Press 261, Press 273, Press 290, Press 291, Press 293, Press 294, Press 295, and Press 296,

The requirements from Registered Construction and Operation Status letter issued June 19, 1988 (Press 240), and Registered Construction and Operation Status letter issued October 23,1991 (Press 241), state that "Any change or modification which may increase the volatile organic compound potential emissions to 25 tons per year or more from the equipment covered in this registration must be approved by OAQ before such change may occur. " The previous operating permits did not anticipate that the potential emissions would be greater than 25 tons per year and therefore did not address the requirements of 326 IAC 8-1-6. The source limited the running time in order to keep VOC emissions below 25 tons per year. Descriptions in Title V operating permits are for descriptive information and do not constitute enforceable conditions.

The requirements from Registered Construction and Operation Status letter issued on November 8, 1989 and Registered Construction and Operation Status letter issued on February 2, 1987 (Press 260 and Press 261) to limit VOC emissions by limiting running

and Press 243 shall be not exceed a combined 39 tons per year, based on 80% VOC flash-off during web heatset ink usage, calculated on a 12 month rolling monthly average. That the total amount of VOC delivered to each press individually, including clean-up solvents, shall not exceed 25 tons per year, per press, based on 80% VOC flash-off during web heatset ink usage, calculated on a 12 month rolling monthly average.

(d) Presses 268 and 269 will be controlled by the North Oxidizer, a 7.6 MMBtu per hr thermal oxidizer, and Press 262 will be controlled by the South Oxidizer, a 1.894 MMBtu per hr thermal oxidizer. The thermal oxidizers shall be in operation at all times during which any of the printing presses controlled by the oxidizers are in operation. Pursuant to CP 107-2726 issued on February 26, 1993 and CP 107-2917 issued on April 6, 1993 the controls of the press, dryer and thermal afterburner for Presses and 269 shall be interlocked such that the press and dryer cannot be operated until such time that the combustion temperature in the thermal afterburner has attained the minimum temperature determined in testing requirements to destroy at least 90% of captured VOC.

The requirements from CP 107-2726 issued on February 26, 1993 and CP 107-2917 issued on April 6, 1993, conditions #5, #7, #8, # 9 and CP 107-2478 issued on June 17, 1992 conditions #4, and #5, were removed and have been replaced with new requirements, in order to regulate all thermal oxidizer within the entire facility on the same parameters, monitoring and reporting schedule to maintain compliance with 326 IAC 8-1-6 (BACT).

(e) The VOC delivered to the applicators at the heatset offset lithographic printing press, identified as Press 297, shall be limited such that the potential to emit VOC from Press 297 shall not exceed 24.9 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. This will make the requirements of 326 IAC 8-1-6, New facilities; General reduction requirements, not applicable and make the addition of that press and the two (2) insignificant press dryers a minor source modification pursuant to 326 IAC 2-7-10.5(d)(5)(A). The potential to emit VOC shall be based on the following equation:

VOC emissions (tons) = (ink usage (tons) X weight % VOC X 80% flash off ) + (fountain solution usage (tons) X weight % VOC X 100% flash off) + (cleaner usage (tons) X weight % VOC X 50% flash off) + (other solutions and solvents usage (tons) X weight % VOC X 100% flash off)

D.3.2 Volatile Organic Compounds (VOCs) [326 IAC 8-1-6]

The VOC content delivered to Stainer 192 shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period. Therefore, the best available control technology (BACT) requirement in 326 IAC 8-1-6 (New Facilities: General Reduction Requirements) does not apply.

D.3.3 Clean-up Solvent VOC Emissions Control

The VOC flash off for clean-up solvent is 100%. As derived from “USEPA’s Alternative Control Techniques Document: Offset Lithographic Printing (EPA 453/R-94 054, June 1994), the accepted shop towel retention factor for clean-up solvent is 50%. A 50% reduction in flash off shall be used in VOC emissions formula in D.3.1 as an emission control technique and shall meet the following conditions:

(a) The clean-up solvent shall have a VOC content of thirty percent (30%) or less, by weight, or a composite vapor pressure less than or equal to ten (10) millimeters of mercury (Hg) at twenty degrees Celsius (20$^{o}$C); and

(b) The clean-up solvents shall be kept in tightly covered tanks or containers during transport and storage; and

(c) The cleaning cloths used with the clean-up solvents shall be placed in tightly closed containers when not in use and while awaiting off-site transport. The cleaning cloths shall be properly cleaned and disposed.

D.3.4 VOC Emissions

Compliance with Condition D.3.1 and D.3.2 shall be demonstrated within 30 days of the end of each month based on the total volatile organic compound usage for the most recent twelve (12) month period and appropriate flash off factors.

D.3.5 Particulate Matter (PM) [326 IAC 6-3]

The PM from Stainer 192 shall not exceed the pound per hour emission rate established as E in

# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
# OFFICE OF AIR QUALITY
# COMPLIANCE DATA SECTION

## Part 70 Quarterly Report

Source Name: R.R. Donnelley & Sons Company
Source Address: 1009 Sloan Street, Crawfordsville, Indiana 47933-2741
Mailing Address: 1009 Sloan Street, Crawfordsville, Indiana 47933-2741
Part 70 Permit No.: T107-5963-00052
Facilities: Press 297
Parameter: VOC
Limit: The VOC delivered to the applicators at the press shall be limited such that VOC emitted shall not exceed 24.9 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. VOC emitted shall be based on the following equation:

VOC emissions (tons) = (ink usage (tons) X weight % VOC X 80% flash off ) + (fountain solution usage (tons) X weight % VOC X 100% flash off) + (cleaner usage (tons) X weight % VOC X 50% flash off) + (other solutions and solvents usage (tons) X weight % VOC X 100% flash off)

Press: _____ YEAR: _____

| Month | VOC Emissions | VOC Emissions | VOC Emissions |
|---|---|---|---|
| | This Month | Previous 11 Months | 12 Month Total |
| | | | |
| | | | |
| | | | |

**9** No deviation occurred in this quarter.

**9** Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

A certification is required for this report.

# Indiana Department of Environmental Management
# Office of Air Quality

## Technical Support Document (TSD) for Part 70
## Minor Source and Significant Permit Modifications

**Source Background and Description**

| | |
|---|---|
| **Source Name:** | **R.R. Donnelley & Sons Company** |
| **Source Location:** | **1009 Sloan Street, Crawfordsville, IN 47933** |
| **County:** | **Montgomery** |
| **SIC Code:** | **2732** |
| **Operation Permit No.:** | **T 107-5963-00052** |
| **Operation Permit Issuance Date:** | **June 21, 2002** |
| **Minor Source Modification No.:** | **107-16768-00052** |
| **Significant Permit Modification No.:** | **107-17225-00052** |
| **Permit Reviewer:** | **CarrieAnn Paukowits** |

The Office of Air Quality (OAQ) has reviewed a modification application from R.R. Donnelly & Sons Company relating to the construction of the following emission units and pollution control devices:

(a) One (1) heatset offset lithographic printing press located in the South Plant, identified as Press 297, with two webs, exhausting through stack SP-5S(S), capacity: 1,076 feet per minute.

(b) Two (2) press dryers, capacity: 1.326 million British thermal units per hour, each.

The press dryers are insignificant activities pursuant to 326 IAC 2-7-1(21)(G)(i).

**History**

On February 5, 2003, R.R. Donnelley & Sons Company submitted an application to the OAQ requesting to add an additional heatset offset lithographic printing press to their existing plant. R.R. Donnelley & Sons Company was issued a Part 70 permit on June 21, 2002. A first Administrative Amendment (107-17119) was issued on February 4, 2003, and a first Significant Permit Modification (107-16731) is on public notice.

**Source Definition**

As stated in the TSD for T 107-5963-00052, issued on June 21, 2002, this book printing and binding company consists of two (2) plants:

(a) North Plant is located at 1009 Sloan St., Crawfordsville, IN; and

(b) South Plant is located at State Road 32 West, Crawfordsville, IN.

Since the two (2) plants are located adjacent to each other, separated by a public road and a railroad right of way, have the same SIC codes and are owned by one (1) company, they are considered one (1) source. On October 13, 1997, a Review Request (RR-107-8861-00052) was issued

designating the North Plant (107-00010) and the South Plant (107-00011) as one source. This modification will take place at the South Plant, although the source address is the address of the North Plant.

**Enforcement Issue**

There are no enforcement actions pending.

**Stack Summary**

| Stack ID | Operation | Height (feet) | Diameter (feet) | Flow Rate (acfm) | Temperature (EF) |
|---|---|---|---|---|---|
| SP-5S(S) | Press 297 | 60 | 1.50 | 2,000 | 350 |

**Recommendation**

The staff recommends to the Commissioner that the Part 70 Minor Source Modification and Significant Permit Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on February 5, 2003.

**Emission Calculations**

See pages 1 through 3 of 3 of Appendix A of this document for detailed emissions calculations.

**Potential To Emit of Modification**

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA.”

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

| Pollutant | Potential To Emit (tons/year) |
|---|---|
| PM | 0.022 |
| $PM_{10}$ | 0.088 |
| $SO_2$ | 0.007 |
| VOC | 26.5 |
| CO | 0.976 |
| $NO_X$ | 1.16 |

| HAPs | Potential To Emit (tons/year) |
|---|---|
| Ethyl benzene | 0.012 |
| Xylenes | 0.030 |
| Cumene | 0.030 |
| Glycol Ethers | 1.33 |
| Ethylene Glycol | 0.663 |
| Benzene | 2.44E-5 |
| Dichlorobenzene | 1.39E-5 |
| Formaldehyde | 0.001 |
| Hexane | 0.021 |
| Toluene | 3.95E-5 |
| Lead | 5.81E-6 |
| Cadmium | 1.28E-5 |
| Chromium | 1.63E-5 |
| Manganese | 4.41E-6 |
| Nickel | 2.44E-5 |
| TOTAL | 2.08 |

**Justification for Modification**

The Part 70 Operating Permit is being modified through a Part 70 Minor Source Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5(d)(5)(A), modifications for which the potential to emit VOC is limited to less than twenty-five (25) tons per year by limiting total annual solvent usage or maximum volatile organic compound content, or both, and 326 IAC 2-7-10.5(d)(7), a change for which a source requests an emission limit to make 326 IAC 8-1-6 not applicable. The proposed operating conditions shall be incorporated into the Part 70 Operating Permit as a Significant Permit Modification (SPM 107-17225-00052) in accordance with 326 IAC 2-7-12(d)(1). This approval to operate is not a minor modification because it requires a case-by-case determination of an emission limitation. The Significant Permit Modification will give the source approval to operate the new emission units.

**County Attainment Status**

The source is located in Montgomery County.

| Pollutant | Status |
|---|---|
| $PM_{10}$ | attainment |
| $SO_2$ | attainment |
| $NO_2$ | attainment |

| Pollutant | Status |
|---|---|
| Ozone | attainment |
| CO | attainment |
| Lead | attainment |

(a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Montgomery County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Montgomery County has been classified as attainment or unclassifiable for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive PM emissions are not counted toward determination of PSD and Emission Offset applicability.

**Source Status**

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

| Pollutant | Emissions (tons/year) |
|---|---|
| PM | greater than 250 |
| $PM_{10}$ | greater than 250 |
| $SO_2$ | greater than 100, less than 250 |
| VOC | greater than 250 |
| CO | less than 100 |
| $NO_X$ | greater than 100, less than 250 |

(a) This existing source, which is not one of the 28 listed source categories, is a major stationary source because an attainment regulated pollutant is emitted at a rate of two hundred fifty (250) tons per year or more.

(b) These emissions are based upon the TSD to T 107-5963-00052, issued on June 21, 2002.

**Potential to Emit of Modification After Issuance**

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

| Pollutant | PM (tons/yr) | $PM_{10}$ (tons/yr) | $SO_2$ (tons/yr) | VOC (tons/yr) | CO (tons/yr) | $NO_x$ (tons/yr) |
|---|---|---|---|---|---|---|
| Printing Press | - | - | - | 24.9 | - | - |
| Press Dryers | 0.022 | 0.088 | 0.007 | 0.064 | 0.976 | 1.16 |
| Total Emissions Increase | 0.022 | 0.088 | 0.007 | less than 25 | 0.976 | 1.16 |
| PSD Significant Level | 25 | 15 | 40 | 40 | 100 | 40 |

This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply. The unrestricted potential to emit VOC is less than 40 tons per year. Therefore, no limit is required to make this a minor modification pursuant to 326 IAC 2-2, PSD.

**Federal Rule Applicability**

(a) This significant permit modification does not involve a pollutant-specific emissions unit as defined in 40 CFR 64.1:

(1) with the potential to emit before controls equal to or greater than the major source;

(2) that is subject to an emission limitation or standard; and

(3) uses a control device as defined in 40 CFR 64.1 to comply with that emission limitation or standard.

Therefore, the requirements of 40 CFR 64, Compliance Assurance Monitoring, are not applicable to this modification.

(b) This modification is not subject to the requirements of 40 CFR 60, Subpart QQ, Standards of Performance for the Graphics Arts Industry: Publication Rotogravure Printing, because the printing press is a heatset offset lithographic printing press, not a rotogravure printing press.

(c) This modification is not subject to the requirements of 40 CFR 60, Subpart FFF, Standards of Performance for Flexible Vinyl and Urethane Coating and Printing, because this modification is not a rotogravure printing line.

(d) This facility applies coatings to paper. Therefore, the requirements of 40 CFR 60, Subpart VVV, Standards of Performance for Polymeric Coating of Supporting Substrates Facilities, cannot be applicable.

(e) This facility is not a publication rotogravure, product and packaging rotogravure, or wide-web flexographic printing press. Therefore, the requirements of 40 CFR 63, Subpart KK, National Emission Standards for the Printing and Publishing Industry, do not apply.

(f) This facility performs lithographic web printing. Therefore, pursuant to 40 CFR 63.3300(c), the facility is not subject to the requirements of 40 CFR 63, Subpart JJJJ, National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating.

(g) This modification does not include one or more units that belong to one or more source categories affected by the Section 112(j) MACT Hammer date of May 15, 2002. The source submitted an applicability determination request for other units at this source, which are not related to this modification, for Section 112(j) of the Clean Air Act (40 CFR Part 63.50 through 63.56)

**State Rule Applicability - Individual Facilities**

326 IAC 2-7-10.5 (Source Modification)

(a) This source shall limit the potential to emit VOC from this modification to less than 25 tons per year. Therefore, this source qualifies for a minor source modification pursuant to 326 IAC 2-7-10.5(d)(5)(A). This limit shall be achieved by limiting the VOC delivered to the applicators at the heatset offset lithographic printing press, identified as Press 297, such that the potential to emit VOC from that facility shall not exceed 24.9 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. The unrestricted potential to emit VOC from the two (2) press dryers is less than 0.1 ton per year. Therefore, the potential to emit VOC from the entire modification is limited to less than 25 tons per year. The potential to emit VOC will be based on the following equation, as is consistent with Condition D.3.1(a) of T 107-5963-00052, issued on June 21, 2002:

VOC emissions (tons) = (ink usage (tons) X weight % VOC X 80% flash off ) + (fountain solution usage (tons) X weight % VOC X 100% flash off) + (cleaner usage (tons) X weight % VOC X 50% flash off) + (other solutions and solvents usage (tons) X weight % VOC X 100% flash off)

(b) Pursuant to Condition D.3.3 of T 107-5963-00052, issued on June 21, 2002, as derived from "USEPA's Alternative Control Techniques Document: Offset Lithographic Printing" (EPA 453/R-94 054, June 1994), the accepted shop towel retention factor for clean-up solvent is 50%. Therefore, a 50% reduction in flash off shall be used in the formula above, and the facility shall comply with the following:

(1) The clean-up solvent shall have a VOC content of thirty percent (30%) or less, by weight, or a composite vapor pressure less than or equal to ten (10) millimeters of mercury (Hg) at twenty degrees Celsius ($20^{o}$ C); and

(2) The clean-up solvents shall be kept in tightly covered tanks or containers during transport and storage; and

(3) The cleaning cloths used with the clean-up solvents shall be placed in tightly closed containers when not in use and while awaiting off-site transport. The cleaning cloths shall be properly cleaned and disposed.

326 IAC 8-1-6 (New Facilities; General Reduction Requirements)

The VOC emissions from the heatset offset lithographic printing press, identified as Press 297, are limited to less than 25 tons per year, in order to comply with 326 IAC 2-7-10.5. This limit shall also make the requirements of 326 IAC 8-1-6 not applicable.

326 IAC 8-2-5 (Paper coating operations)

The heatset offset lithographic printing press, identified as Press 297, does not fully saturate the substrate. Therefore, the requirements of 326 IAC 8-2-5 are not applicable.

326 IAC 8-5-5 (Graphic arts operations)

The new printing press is a heatset offset lithographic printing press. This source is not a packaging rotogravure, publication rotogravure, or flexographic printing source. Therefore, the requirements of 326 IAC 8-5-5 do not apply.

**Compliance Requirements**

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

There are no specific compliance monitoring requirements applicable to the heatset offset lithographic printing press, identified as Press 297.

**Proposed Changes**

The permit language is changed to read as follows (deleted language appears as ~~strikeouts~~, new language appears in **bold**):

Note that the existing record keeping and reporting conditions (Conditions D.3.13 and D.3.14) satisfy the record keeping and reporting requirements of the new emission unit.

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This book printing and binding operation source consists of the following emission units and pollution control devices:

North Plant:

(1) Four (4) natural gas or propane fired boilers, with a maximum rating of 20.9 MMBtu (million British thermal units) per hour each:

(a) Boiler #1(N) with emissions exhausting through stack SB-4A(N).

(b) Boiler #2(N) with emissions exhausting through stack SB-4B(N).

(c) Boiler #3(N) with emissions exhausting through stack SB-4C(N).

(d) Boiler #4(N) with emissions exhausting through stack SB-4D(N).

(2) One (1) natural gas or propane fired boiler, with a maximum rating of 2.56 MMBtu(million British thermal units) per hour: Boiler #5(N) with emissions exhausting through stack SB-4E(N).

(3) Four (4) Paper Trim Cyclones:

(a) Paper Trim Cyclone #1(N) emissions exhausting through stack SBP-5H(N).

(b) Paper Trim Cyclone #2(N) emissions exhausting through stack SBP-5I(N).

(c) Paper Trim Cyclone #3(N) emissions exhausting through stack SBP-5J(N).

(d) Paper Trim Cyclone #4(N) emissions exhausting through stack SBP-5K(N).

(4) Three (3) Paper Dust Collectors:

(a) Dust Collector #1(N) consists of a cyclone followed by a baghouse for particulate control and is exhausted through SD-6A(N).

(b) Dust Collector #2(N) consists of a baghouse for particulate control and is exhausted through SD-6B(N).

(c) Dust Collector #3(N) consists of a cyclone and followed by two (2) baghouses for particulate control and is exhausted through SD-6C(N).

(5) One (1) In-line Stainer 192 used for edge staining paper using low pressure-high volume spray coating and using dry filters for overspray control and exhausting through stack BS-4X(N).

(6) Two (2) heatset web offset lithographic printing presses, controlled by one (1) 7.6 MMBtu per hour natural gas fired thermal oxidizer (“North Oxidizer”) exhausting to one (1) stack identified as SP-5Y(N), including:

(a) One (1) Mitsubishi heatset web offset lithographic printing press with two (2) units and two (2) webs identified as Press 268 with a maximum line speed of 1600 feet per minute and a maximum printing width of 64 inches, with associated in-line equipment; and

(b) One (1) Toshiba heatset web offset lithographic printing Press with four (4) units and two (2) webs identified as Press 269 with a maximum line speed of 1600 feet per minute and a maximum printing width of 50 inches, with associated in-line equipment.

(7) One (1) Hantscho heatset web offset lithographic printing Press with two (2) units and two (2) webs identified as Press 240 with a maximum line speed of 1000 feet per minute and a maximum printing width of 33 inches, with associated in-line equipment, exhausting to one (1) stack SP-5R(N).

(8) One (1) KBA Compacta heatset web offset lithographic printing Press with two (2) units and two (2) webs identified as Press 241 with a maximum line speed of 1100 feet per minute and a maximum printing width of 26 inches, with associated in-line equipment, exhausting

to one (1) stack SP-5S(N).

(9) One (1) Hantscho heatset web offset lithographic printing press with four (4) units and two (2) webs identified as Press 245 with a maximum line speed of 1000 feet per minute and a maximum printing width of 33 inches, with associated in-line equipment, exhausting to one (1) stack SP-5Q(N).

(10) One (1) Timson heatset web offset lithographic printing press with one (1) unit and one (1) web identified as Press 242 with a maximum line speed of 1200 feet per minute and a maximum printing width of 47 inches, with associated in-line equipment, exhausting to one (1) stack SP-5Z(N).

(11) One (1) Timson heatset web offset lithographic printing press with one (1) unit and one (1) web identified as Press 243 with a maximum line speed of 1200 feet per minute and a maximum printing width of 47 inches, with associated in-line equipment, exhausting to one (1) stack SP-5AA(N).

(12) One (1) Harris heatset web offset lithographic printing press with two (2) units and two (2)

webs identified as Press 285 with a maximum line speed of 825 feet per minute and a maximum printing width of 26 inches, with associated in-line equipment, exhausting to one (1) stack SP-5K(N).

(13) One (1) Harris heatset web offset lithographic printing press with two (2) units and two (2) webs identified as Press 286 with a maximum line speed of 825 feet per minute and a maximum printing width of 31 inches, with associated in-line equipment, exhausting to one (1) stack SP-5L(N).

(14) One (1) Harris heatset web offset lithographic printing press with four (4)units and two (2) webs identified as Press 287 with a maximum line speed of 825 feet per minute and a maximum printing width of 31 inches, with associated in-line equipment, exhausting to one (1) stack SP-5M(N).

(15) One (1) Harris heatset web offset lithographic printing press with four (4) units and two (2) webs identified as Press 288 with a maximum line speed of 825 feet per minute and a maximum printing width of 31 inches, with associated in-line equipment, exhausting to one (1) stack SP-5N(N).

(16) One (1) Harris heatset web offset lithographic printing press with four (4) units and two (2) webs identified as Press 289 with a maximum line speed of 825 feet per minute and a maximum printing width of 31 inches, with associated in-line equipment, exhausting to one (1) stack SP-5O(N).

(17) Four (4) UV sheetfed offset lithographic presses:

(a) One (1) Heidelberg UV sheetfed offset lithographic press identified as Press 232 with a maximum line speed of 317 feet per minute and a maximum printing width of 25.5 inches including five (5) units and coater, exhausting to one (1) stack SP-5U(N) used as cooling air for UV lamps.

(b) One (1) Heidelberg UV sheetfed offset lithographic press identified as Press 233 with a maximum line speed of 317 feet per minute and a maximum printing width of 25.5 inches including five (5) units and coater, exhausting to one (1) stack SP-

5U(N) used as cooling air for UV lamps.

(c) One (1) Heidelberg UV sheetfed offset lithographic press identified as Press 238 with a maximum line speed of 434 feet per minute and a maximum printing width of 40 inches including six (6) units and coater, exhausting to one (1) stack SP-5V(N) used as cooling air for UV lamps.

(d) One (1) Heidelberg UV sheetfed offset lithographic press identified as Press 239 with a maximum line speed of 473 feet per minute and a maximum printing width of 40 inches including two (2) units and coater, exhausting to one (1) stack SP-5W(N) used as cooling air for UV lamps.

(18) One (1) conventional sheetfed offset lithographic press identified as Press 254 with a maximum line speed of 299 feet per minute and a maximum printing width of 60 inches.

South Plant:

(1) Three (3) natural gas or propane fired boilers, with a maximum rating of 25.1 MMBtu (million British thermal units) per hour each:

(a) Boiler #1(S) with emissions exhausting through stack SB-4A(S).

(b) Boiler #2(S) with emissions exhausting through stack SB-4B(S).

(c) Boiler #3(S) with emissions exhausting through stack SB-4C(S).

(2) Four (4) Paper Trim Cyclones:

(a) Paper Trim Cyclone #1(S) emissions exhausting through stack SBP-5E(S).

(b) Paper Trim Cyclone #2(S) emissions exhausting through stack SBP-5E(S).

(c) Paper Trim Cyclone #3(S) emissions exhausting through stack SBP-5E(S).

(d) Paper Trim Cyclone #4(S) emissions exhausting through stack SBP-5E(S).

(3) Two (2) Paper Dust Collectors:

(a) Dust Collector #1(S) consists of a cyclone followed by two (2) baghouses for particulate control and is exhausted through SD-6A(S).

(b) Dust Collector #2(S) consists of a baghouse for particulate control and is exhausted through SD-6B(S).

(4) One (1) Mitsubishi heatset web offset lithographic printing press with four (4) units and two (2) webs identified as Press 262 with a maximum line speed of 1708 feet per minute and a maximum printing width of 61 inches, with associated in-line equipment, controlled by one (1) 1.894 MMBtu per hour natural gas fired thermal oxidizer (“South Oxidizer”) exhausting to one (1) stack identified as SP-5N(S).

(5) One (1) Hantscho heatset web offset lithographic printing press with four (4) units and two (2) webs identified as Press 270 with a maximum line speed of 807 feet per minute and a maximum printing width of 33 inches, with associated in-line equipment, exhausting to SP-

5F(S).

(6) One (1) Cottrell heatset web offset lithographic printing press with four (4) units and two (2) webs identified as Press 272 with a maximum line speed of 1000 feet per minute and a maximum printing width of 64 inches, with associated in-line equipment, exhausting to one (1) stack SP-5D(S).

(7) One (1) Mitsubishi heatset web offset lithographic printing press with four (4) units and two (2) webs identified as Press 273 with a maximum line speed of 1615 feet per minute and a maximum printing width of 64 inches, with associated in-line equipment, exhausting to one (1) stack SP-5L(S).

(8) One (1) Cottrell heatset web offset lithographic printing press with four (4) units and two (2) webs identified as Press 274 with a maximum line speed of 1000 feet per minute and a maximum printing width of 64 inches, with associated in-line equipment, exhausting to one (1) stack SP-5C(S).

(9) One (1) Cottrell heatset web offset lithographic printing press with four (4) units and two (2) webs identified as Press 276 with a maximum line speed of 1200 feet per minute and a maximum printing width of 64 inches, with associated in-line equipment, exhausting to one (1) stack SP-5E(S).

(10) One (1) Toshiba heatset web offset lithographic printing press with four (4) units and one (1) web identified as Press 260 with a maximum line speed of 1615 feet per minute and a maximum printing width of 36 inches, with associated in-line equipment, exhausting to one (1) stack SP-5I(S).

(11) One (1) Toshiba heatset web offset lithographic printing press with four (4) units and one (1) web identified as Press 261 with a maximum line speed of 1500 feet per minute and a maximum printing width of 36 inches, with associated in-line equipment, exhausting to one (1) stack SP-5J(S).

(12) One (1) Hantscho heatset web offset lithographic printing press with one (1) unit and one (1) web identified as Press 290 with a maximum line speed of 800 feet per minute and a maximum printing width of 26 inches, with associated in-line equipment, exhausting to one (1) stack SP-5G(S).

(13) One (1) Hantscho heatset web offset lithographic printing press with four (4) units and two (2) webs identified as Press 291 with a maximum line speed of 800 feet per minute and a maximum printing width of 26 inches, with associated in-line equipment, exhausting to one (1) stack SP-5H(S).

(14) One (1) Hantscho heatset web offset lithographic printing press with four (4) units and two (2) webs identified as Press 293 with a maximum line speed of 1000 feet per minute and a maximum printing width of 33 inches, with associated in-line equipment, exhausting to one (1) stack SP-5K(S).

(15) One (1) Hantscho heatset web offset lithographic printing press with four (4) units and two (2) webs identified as Press 294 with a maximum line speed of 1076 feet per minute and a maximum printing width of 33 inches, with associated in-line equipment, exhausting to one (1) stack SP-5M(S).

(16) One (1) Hantscho heatset web offset lithographic printing press with two (2) units and two (2) webs identified as Press 295 with a maximum line speed of 1000 feet per minute and a maximum printing width of 33 inches, with associated in-line equipment, exhausting to one (1) stack SP-5P(S).

(17) One (1) Harris heatset web offset lithographic printing press with two (2) units and two (2) webs identified as Press 296 with a maximum line speed of 860 feet per minute and a maximum printing width of 31 inches, with associated in-line equipment, exhausting to one (1) stack SP-5Q(S).

(18 ) One (1) Heidelberg sheetfed offset lithographic press identified as Press 258 with a maximum line speed of 505 feet per minute and a maximum printing width of 40.5 inches including six (6) units and coater, exhausting to one (1) stack SP-5R(S) used as cooling air for electric heaters.

**(19) One (1) heatset offset lithographic printing press located in the South Plant, identified as Press 297, with two webs, exhausting through stack SP-5S(S), capacity: 1,076 feet per minute.**

**SECTION D.3 FACILITY OPERATION CONDITION**

**Facility Description [326 IAC 2-7-5(15)]:** Printing Presses

North:
(5) One (1) In-line Stainer 192 used for edge staining paper using low pressure-high volume spray coating and using dry filters for overspray control and exhausting through stack BS-4X(N).
(6) Two (2) heatset web offset lithographic printing presses, controlled by one (1) 7.6 MMBtu per hour natural gas fired thermal oxidizer ("North Oxidizer") exhausting to one (1) stack identified as SP-5Y(N), including:
(a) One (1) Mitsubishi heatset web offset lithographic printing press with two (2) units and two (2) webs identified as Press 268 with a maximum line speed of 1600 feet per minute and a maximum printing width of 64 inches, with associated in-line equipment; and
(b) One (1) Toshiba heatset web offset lithographic printing press with two (2) units and two (2) webs identified as Press 269 with a maximum line speed of 1600 feet per minute and a maximum printing width of 50 inches, with associated In-line equipment.
(7) One (1) Hantscho heatset web offset lithographic printing press with two (2) units and two (2) webs identified as Press 240 with a maximum line speed of 1000 feet per minute and a maximum printing width of 33 inches, with associated in-line equipment, exhausting to one (1) stack SP-5R(N).
(8) One (1) KBA Compacta heatset web offset lithographic printing press with two (2) units and two (2) webs identified as Press 241 with a maximum line speed of 1100 feet per minute and a maximum printing width of 26 inches, with associated in-line equipment, exhausting to one (1) stack SP-5S(N).
(9) One (1) Hantscho heatset web offset lithographic printing press with four (4) units and two (2) webs identified as Press 245 with a maximum line speed of 1000 feet per minute and a maximum printing width of 33 inches, with associated in-line equipment, exhausting to one (1) stack SP-5Q(N).
(10) One (1) Timson heatset web offset lithographic printing press with one (1) unit and one (1) web identified as Press 242 with a maximum line speed of 1200 feet per minute and a maximum printing width of 47 inches, with associated in-line equipment, exhausting to one (1) stack SP-5Z(N).
(11) One (1) Timson heatset web offset lithographic printing press with one (1) unit and one (1) web identified as Press 243 with a maximum line speed of 1200 feet per minute and a maximum printing width of 47 inches, with associated in-line equipment, exhausting to one (1) stack SP-5AA(N).
(12) One (1) Harris heatset web offset lithographic printing press with two (2) units and two (2) webs identified as Press 285 with a maximum line speed of 825 feet per minute and a maximum printing width of 26 inches, with associated in-line equipment, exhausting to one (1) stack SP-5K(N).
(13) One (1) Harris heatset web offset lithographic printing press with two (2) units and two (2) webs identified as Press 286 with a maximum line speed of 825 feet per minute and a maximum printing width of 31 inches, with associated in-line equipment, exhausting to one (1) stack SP-5L(N).
(14) One (1) Harris heatset web offset lithographic printing press with four (4)units and two (2) webs identified as Press 287 with a maximum line speed of 825 feet per minute and a maximum printing width of 31 inches, with associated in-line equipment, exhausting to one (1) stack SP-5M(N).
(15) One (1) Harris heatset web offset lithographic printing press with four (4) units and two (2) webs identified as Press 288 with a maximum line speed of 825 feet per minute and a maximum printing width of 31 inches, with associated in-line equipment, exhausting to one (1) stack SP-5N(N).
(16) One (1) Harris heatset web offset lithographic printing press with four (4) units and two (2) webs identified as Press 289 with a maximum line speed of 825 feet per minute and a maximum printing width of 31 inches, with associated in-line equipment, exhausting to one (1) stack SP-5O(N).
coater, exhausting to one (1) stack SP-5V(N) used as cooling air for UV lamps.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.

**Facility Description [326 IAC 2-7-5(15)]:**

(17) Four (4) UV sheetfed offset lithographic presses:
(a) One (1) Heidelberg UV sheetfed offset lithographic press identified as Press 232 with a maximum line speed of 317 feet per minute and a maximum printing width of 25.5 inches including five (5) units and coater, exhausting to one (1) stack SP-5U(N) used as cooling air for UV lamps.
(b) One (1) Heidelberg UV sheetfed offset lithographic press identified as Press 233 with a maximum line speed of 317 feet per minute and a maximum printing width of 25.5 inches including five (5) units and coater, exhausting to one (1) stack SP-5U(N) used as cooling air for UV lamps.
(c) One (1) Heidelberg UV sheetfed offset lithographic press identified as Press 238 with a maximum line speed of 434 feet per minute and a maximum printing width of 40 inches including six (6) units and coater, exhausting to one (1) stack SP-5V(N) used as cooling air for UV lamps.
(d) One (1) Heidelberg UV sheetfed offset lithographic press identified as Press 239 with a maximum line speed of 473 feet per minute and a maximum printing width of 40 inches including two (2) units and coater, exhausting to one (1) stack SP-5W(N) used as cooling air for UV lamps.
(18) One (1) conventional sheetfed offset lithographic press identified as Press 254 with a maximum line speed of 299 feet per minute and a maximum printing width of 60 inches.

South:
(4) One (1) Mitsubishi heatset web offset lithographic printing press with four (4) units and two (2) webs identified as Press 262 with a maximum line speed of 1708 feet per minute and a maximum printing width of 61 inches, with associated in-line equipment, controlled by one (1) 1.894 MMBtu per hour natural gas fired thermal oxidizer (“South Oxidizer”) exhausting to one (1) stack identified as SP-5N(S).
(5) One (1) Hantscho heatset web offset lithographic printing press with four (4) units and two (2) webs identified as Press 270 with a maximum line speed of 807 feet per minute and a maximum printing width of 33 inches, with associated in-line equipment, exhausting to SP-5F(S).
(6) One (1) Cottrell heatset web offset lithographic printing press with four (4) units and two (2) webs identified as Press 272 with a maximum line speed of 1000 feet per minute and a maximum printing width of 64 inches, with associated in-line equipment, exhausting to one (1) stack SP-5D(S).
(7) One (1) Mitsubishi heatset web offset lithographic printing press with four (4) units and two (2) webs identified as Press 273 with a maximum line speed of 1615 feet per minute and a maximum printing width of 64 inches, with associated in-line equipment, exhausting to one (1) stack SP-5L(S).
(8) One (1) Cottrell heatset web offset lithographic printing press with four (4) units and two (2) webs identified as Press 274 with a maximum line speed of 1000 feet per minute and a maximum printing width of 64 inches, with associated in-line equipment, exhausting to one (1) stack SP-5C(S).
(9) One (1) Cottrell heatset web offset lithographic printing press with four (4) units and two (2) webs identified as Press 276 with a maximum line speed of 1200 feet per minute and a maximum printing width of 64 inches, with associated in-line equipment, exhausting to one (1) stack SP-5E(S).
(10) One (1) Toshiba heatset web offset lithographic printing press with four (4) units and one (1) web identified as Press 260 with a maximum line speed of 1615 feet per minute and a maximum printing width of 36 inches, with associated in-line equipment, exhausting to one (1) stack SP-5I(S).
(11) One (1) Toshiba heatset web offset lithographic printing press with four (4) units and one (1) web identified as Press 261 with a maximum line speed of 1500 feet per minute and a maximum printing width of 36 inches, with associated in-line equipment, exhausting to one (1) stack SP-5J(S).
(12) One (1) Hantscho heatset web offset lithographic printing press with one (1) unit and one (1) web identified as Press 290 with a maximum line speed of 800 feet per minute and a maximum printing width of 26 inches, with associated in-line equipment, exhausting to one (1) stack SP-5G(S).
(13) One (1) Hantscho heatset web offset lithographic printing press with four (4) units and two (2) webs identified as Press 291 with a maximum line speed of 800 feet per minute and a maximum printing width of 26 inches, with associated in-line equipment, exhausting to one (1) stack SP-5H(S).

**Facility Description [326 IAC 2-7-5(15)]:**

(14) One (1) Hantscho heatset web offset lithographic printing press with four (4) units and two (2) webs identified as Press 293 with a maximum line speed of 1000 feet per minute and a maximum printing width of 33 inches, with associated in-line equipment, exhausting to one (1) stack SP-5K(S).
(15) One (1) Hantscho heatset web offset lithographic printing press with four (4) units and two (2) webs identified as Press 294 with a maximum line speed of 1076 feet per minute and a maximum printing width of 33 inches, with associated in-line equipment, exhausting to one (1) stack SP-5M(S).
(16) One (1) Hantscho heatset web offset lithographic printing press with two (2) units and two (2) webs identified as Press 295 with a maximum line speed of 1000 feet per minute and a maximum printing width of 33 inches, with associated in-line equipment, exhausting to one (1) stack SP-5P(S).
(17) One (1) Harris heatset web offset lithographic printing press with two (2) units and two (2) webs identified as Press 296 with a maximum line speed of 860 feet per minute and a maximum printing width of 31 inches, with associated in-line equipment, exhausting to one (1) stack SP-5Q(S).
(18 ) One (1) Heidelberg sheetfed offset lithographic press identified as Press 258 with a maximum line speed of 505 feet per minute and a maximum printing width of 40.5 inches including six (6) units and coater, exhausting to one (1) stack SP-5R(S) used as cooling air for electric heaters.
**(19) One (1) heatset offset lithographic printing press located in the South Plant, identified as Press 297, with two webs, exhausting through stack SP-5S(S), capacity: 1,076 feet per minute.**

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

D.3.1 Volatile Organic Compounds (VOCs) [326 IAC 8-1-6] **[326 IAC 2-7-10.5(d)(5)(A)]**

(a) The VOC content delivered to the applicator of each press shall be limited such that VOC emitted is less than twenty-five (25) tons per twelve (12) consecutive month period. Therefore, the best available control technology (BACT) requirement in 326 IAC 8-1-6 (New Facilities: General Reduction Requirements) does not apply. VOC emitted will be based on the following equation:

VOC emissions (tpy)= (ink usage X volatile content X 80% flash off )+ (fountain solution usage X volatile content X 100% flash off) + (cleaner usage X volatile content X 50% flash off )

The following presses shall be limited:

Press 240, Press 241, Press 245, Press 289, Press 238, Press 239, Press 260, Press 261, Press 273, Press 290, Press 291, Press 293, Press 294, Press 295, and Press 296,

The requirements from Registered Construction and Operation Status letter issued June 19, 1988 (Press 240), and Registered Construction and Operation Status letter issued October 23,1991 (Press 241), state that "Any change or modification which may increase the volatile organic compound potential emissions to 25 tons per year or more from the equipment covered in this registration must be approved by OAQ before such change may occur. " The previous operating permits did not anticipate that the potential emissions would be greater than 25 tons per year and therefore did not address the requirements of 326 IAC 8-1-6. The source limited the running time in order to keep VOC emissions below 25 tons per year. Descriptions in Title V operating permits are for descriptive information and do not constitute enforceable conditions.

The requirements from Registered Construction and Operation Status letter issued on November 8, 1989 and Registered Construction and Operation Status letter issued on

February 2, 1987 (Press 260 and Press 261) to limit VOC emissions by limiting running time to 5000 hours per year; and PC (54) 1853 issued October 20, 1990 limiting impressions, and usage of ink, fountain solution, and cleaning solution, maintain a log of information and submit a quarterly report for monthly hour usage are replaced with the new limits.

The requirements from PC (54) 1746 issued on May 3, 1989 (Press 245) limiting hours of operation, limiting by press description, maintenance of a log of information and quarterly reporting of hours used ; PC (54) 1740 issued on April 5, 1989 (Press 293) limiting hours of operation, limiting by press description; Registered Construction (107) 2045 issued October 17, 1991 (Press 294) limiting by press description and pound per hour of ink and solution usage; Registered Construction and Operation Status CP 107-2947 issued April 23, 1993 (Press 296) limiting by press description; and Registered Construction and Operation Status CP 107-3433 issued January 21, 1994 (Press 296) limiting by press description are replaced with the new limits. Descriptions in Title V operating permits are for descriptive information and do not constitute enforceable conditions.

The requirements from PC (54) 1257 issued July 11, 1978 (Press 287 and Press 288), PC (34) 1285 issued on September 6, 1978 (Press 286) and PC (54) 1398 issued on June 18, 1979 limiting hydrocarbons (Press 270) and requiring the use of non-photochemically reactive hydrocarbons, are replaced because these presses were constructed prior to January 1, 1980 and are not subject to Article 8 rules. Also included are presses Press 285, Press 254, Press 272, Press 274 and Press 276 which were also built prior to January 1, 1980.

Exempt Construction and Operation Status CP 107-4781 issued September 28, 1995 (Press 258) is replaced by a new limitation on potential to emit of 10 tons per year. Any change or modification which may increase the volatile organic compound potential emissions to more than 10 tons per year must be reported to IDEM, OAQ.

Remaining presses will be limited as follows:

(b) The VOC content delivered to the applicator of the press shall be limited such that VOC emitted is less than twenty-five (25) tons combined pressroom emissions from Press 232 and Press 233 (combined) per twelve (12) consecutive month period. Therefore, the best available control technology (BACT) requirement in 326 IAC 8-1-6 (New Facilities: General Reduction Requirements) does not apply. VOC emitted will be based on the following equation:

VOC emissions (tpy)= (ink usage X volatile content X 80% flash off )+ (fountain solution usage X volatile content X 100% flash off) + (cleaner usage X volatile content X 50% flash off )

The requirements from Registered Construction and Operation Status (107) 2042 issued on July 11, 1991 (Press 232 and Press 233) to use an ultraviolet light curing system to limit VOC releases from the ink, the requirements to use a less volatile printing aid than isopropyl alcohol* and limiting fountain solution to 2.5 percent VOC per gallon is being replaced with new language and limits because in order to maintain consistency in permit language, reporting and monitoring, it is intended to limit the VOC, rather than hours, impressions and limiting volatile content of solutions or press descriptions. Descriptions in Title V operating permits are for descriptive information and do not constitute enforceable conditions.

Amendment 107-10512-00052 issued March 15, 1999 allowed usage of isopropyl alcohol at 750 pounds per year as part of the fountain solution and shall remain in effect.

(c) Pursuant to CP 107-4233 issued April 20, 1995, VOC input usage to Presses Press 242 and Press 243 shall be not exceed a combined 39 tons per year, based on 80% VOC flash-off during web heatset ink usage, calculated on a 12 month rolling monthly average. That the total amount of VOC delivered to each press individually, including clean-up solvents, shall not exceed 25 tons per year, per press, based on 80% VOC flash-off during web heatset ink usage, calculated on a 12 month rolling monthly average.

(d) Presses 268 and 269 will be controlled by the North Oxidizer, a 7.6 MMBtu per hr thermal oxidizer, and Press 262 will be controlled by the South Oxidizer, a 1.894 MMBtu per hr thermal oxidizer. The thermal oxidizers shall be in operation at all times during which any of the printing presses controlled by the oxidizers are in operation. Pursuant to CP 107-2726 issued on February 26, 1993 and CP 107-2917 issued on April 6, 1993 the controls of the press, dryer and thermal afterburner for Presses and 269 shall be interlocked such that the press and dryer cannot be operated until such time that the combustion temperature in the thermal afterburner has attained the minimum temperature determined in testing requirements to destroy at least 90% of captured VOC.

The requirements from CP 107-2726 issued on February 26, 1993 and CP 107-2917 issued on April 6, 1993, conditions #5, #7, #8, # 9 and CP 107-2478 issued on June 17, 1992 conditions #4, and #5, were removed and have been replaced with new requirements, in order to regulate all thermal oxidizer within the entire facility on the same parameters, monitoring and reporting schedule to maintain compliance with 326 IAC 8-1-6 (BACT).

**(e) The VOC delivered to the applicators at the heatset offset lithographic printing press, identified as Press 297, shall be limited such that the potential to emit VOC from Press 297 shall not exceed 24.9 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. This will make the requirements of 326 IAC 8-1-6, New facilities; General reduction requirements, not applicable and make the addition of that press and the two (2) insignificant press dryers a minor source modification pursuant to 326 IAC 2-7-10.5(d)(5)(A). The potential to emit VOC shall be based on the following equation:**

**VOC emissions (tons) = (ink usage (tons) X weight % VOC X 80% flash off ) + (fountain solution usage (tons) X weight % VOC X 100% flash off) + (cleaner usage (tons) X weight % VOC X 50% flash off) + (other solutions and solvents usage (tons) X weight % VOC X 100% flash off)**

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**
**OFFICE OF AIR QUALITY**
**COMPLIANCE DATA SECTION**

## Part 70 Quarterly Report

**Source Name:** R.R. Donnelley & Sons Company
**Source Address:** 1009 Sloan Street, Crawfordsville, Indiana 47933-2741
**Mailing Address:** 1009 Sloan Street, Crawfordsville, Indiana 47933-2741
**Part 70 Permit No.:** T107-5963-00052
**Facilities:** Press 297
**Parameter:** VOC
**Limit:** The VOC delivered to the applicators at the press shall be limited such that VOC emitted shall not exceed 24.9 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. VOC emitted shall be based on the following equation:

**VOC emissions (tons) = (ink usage (tons) X weight % VOC X 80% flash off ) + (fountain solution usage (tons) X weight % VOC X 100% flash off) + (cleaner usage (tons) X weight % VOC X 50% flash off) + (other solutions and solvents usage (tons) X weight % VOC X 100% flash off)**

**Press:** _____ **YEAR:** _____

| Month | VOC Emissions | VOC Emissions | VOC Emissions |
|---|---|---|---|
| | This Month | Previous 11 Months | 12 Month Total |
| | | | |
| | | | |
| | | | |

9 **No deviation occurred in this quarter.**

9 **Deviation/s occurred in this quarter.**
**Deviation has been reported on:** _____

**Submitted by:** _____
**Title / Position:** _____
**Signature:** _____
**Date:** _____
**Phone:** _____

**A certification is required for this report.**

**Conclusion**

The construction and operation of this proposed modification shall be subject to the conditions of the attached Part 70 Minor Source Modification No. 107-16768-00052, and proposed Part 70 Significant Permit Modification No. 107-17225-00052.

**Appendix A: Emissions Calculations**
**VOC From Printing Press Operations**

**Company Name:** R.R. Donnelley & Sons Company
**Address City IN Zip:** 1009 Sloan Street, Crawfordsville, IN 47933
**Minor Source Modification:** 107-16768-00052
**Significant Permit Modification:** 107-17225-00052
**Reviewer:** CarrieAnn Paukowits
**Date:** February 5, 2003

THROUGHPUT

| Press I.D. | MAXIMUM LINE SPEED (FEET/MIN) | MAXIMUM PRINT WIDTH (INCHES) | MMin^2/YEAR |
|---|---|---|---|
| | | 33 per web, 66 total | |
| 297 | 1076 | 66 | 447912 |

INK VOCS

| Ink Name<br>Press Id | Maxium Coverage<br>'(lbs/MMin^2) | Weight % Volatiles* | Flash Off % | Adjusted Flash Off %** | Throughput<br>(MMin^2/Year) | Maximum Potential VOC Emissions<br>(lbs/hr) | Maximum Potential VOC Emissions<br>(tons/year) | VOC Emissions with adjusted flash off<br>(lbs/hr) | VOC Emissions with adjusted flash off<br>(tons/year) |
|---|---|---|---|---|---|---|---|---|---|
| **Press 297** | | | | | | | | | |
| Lithographic Ink | 0.297 | 36.6% | 80.00% | 80.00% | 447912 | 4.45 | 19.47 | 4.45 | 19.47 |
| **Solutions and Solvents** | | | | | | | | | |
| Fountain Solution | 0.037 | 14.2% | 100.00% | 100.00% | 447912 | 0.27 | 1.18 | 0.27 | 1.18 |
| Manual Clean-up Solvent | 0.013 | 100% | 100.00% | 50.00% | 447912 | 0.66 | 2.91 | 0.33 | 1.46 |
| Automatic Blanket Wash | 0.013 | 100% | 100.00% | 100.00% | 447912 | 0.66 | 2.91 | 0.66 | 2.91 |
| | | | | | **Total VOC Emissions =** | **6.04** | **26.5** | **5.71** | **25.0** |

VOC emissions are limited to 24.9 tons per year.

| Weight % Ethyl benzene | Weight % Xylenes | Weight % Cumene | Weight % Glycol Ethers | Weight % Ethylene Glycol | Maximum Potential Ethyl benzene Emissions<br>(tons/year) | Maximum Potential Xylenes Emissions<br>(tons/year) | Maximum Potential Cumene Emissions<br>(tons/year) | Maximum Potential Glycol Ethers Emissions<br>(tons/year) | Maximum Potential Ethylene Glycol Emissions<br>(tons/year) | | Ethyl benzene Emissions with adjusted flash off<br>(tons/year) | Xylenes Emissions with adjusted flash off<br>(tons/year) | Cumene Emissions with adjusted flash off<br>(tons/year) | Glycol Ethers Emissions with adjusted flash off<br>(tons/year) | Ethylene Glycol Emissions with adjusted flash off<br>(tons/year) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | |
| 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | | | | | | | | | | | | | | | |
| 0.00% | 0.00% | 0.00% | 9.00% | 8.00% | 0.000 | 0.000 | 0.000 | 0.746 | 0.663 | | 0.000 | 0.000 | 0.000 | 0.746 | 0.663 |
| 0.00% | 0.00% | 0.00% | 20.00% | 0.00% | 0.000 | 0.000 | 0.000 | 0.582 | 0.000 | | 0.000 | 0.000 | 0.000 | 0.291 | 0.000 |
| 0.41% | 1.03% | 1.03% | 0.00% | 0.00% | 0.012 | 0.030 | 0.030 | 0.000 | 0.000 | | 0.012 | 0.030 | 0.030 | 0.000 | 0.000 |
| | | | | Totals: | **0.012** | **0.030** | **0.030** | **1.33** | **0.663** | | **0.012** | **0.030** | **0.030** | **1.04** | **0.663** |

**Total HAPs:** **2.06**

**Total HAPs with adjusted flash off:** **1.77**

** Adjusted flash off for clean-up solvent of 50% based on the requirements of Condition D.3.3 of the existing Title V and "USEPA's Alternative Control Techniques Document: Offset Lithographic Printing" (EPA 453/R-94 054, June 1994)
*VOC (Tons/Year) = Maximum Coverage pounds per MMin^2 * Weight % volatiles (weight % of water & organics - weight % of water = weight % organics) * Flash off * Throughput * 1 Ton per 2000 pounds

METHODOLOGY

Throughput = Maxium line speed feet per minute * Convert feet to inches * Maximum print width inches * 60 minutes per hour * 8760 hours per year = MMin^2 per Year
VOC = Maximum Coverage pounds per MMin^2 * Weight percentage volatiles (water minus organics) * Flash off * Throughput * Tons per 2000 pounds = Tons per Year
NOTE: HEAT SET OFFSET PRINTING HAS AN ASSUMED FLASH OFF OF 80% and NON-HEATSET OFFSET LITHOGRAPHIC PRINTING HAS AN ASSUMED FLASH OFF OF 5%.
OTHER TYPES OF PRINTERS HAVE A FLASH OFF OF 100%.
(Source -OAQPS Draft Guidance, "Control of Volatile Organic Compound Emisions from Offset Lithographic Printing (9/93) )

**Appendix A: Emissions Calculations**
**Natural Gas Combustion Only**
**MM BTU/HR <100**

**Company Name:** R.R. Donnelley & Sons Company
**Address City IN Zip:** 1009 Sloan Street, Crawfordsville, IN 47933
**Minor Source Modification:** 107-16768-00052
**Significant Permit Modification:** 107-17225-00052
**Reviewer:** CarrieAnn Paukowits
**Date:** February 5, 2003

Two (2) Heatset Lithographic Offset Press Dryers

| Heat Input Capacity MMBtu/hr | Potential Throughput MMCF/yr |
|---|---|
| 2.6520 | 23.23 |

| | Pollutant | | | | | |
|---|---|---|---|---|---|---|
| | PM* | PM10* | SO2 | NOx | VOC | CO |
| Emission Factor in lb/MMCF | 1.9 | 7.6 | 0.6 | 100.0 **see below | 5.5 | 84.0 |
| Potential Emission in tons/yr | 0.022 | 0.088 | 0.007 | 1.16 | 0.064 | 0.976 |

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).
See page 3 for HAPs emissions calculations.

**Appendix A: Emissions Calculations**
**Natural Gas Combustion Only**
**MM BTU/HR <100**
**HAPs Emissions**

**Company Name:** R.R. Donnelley & Sons Company
**Address City IN Zip:** 1009 Sloan Street, Crawfordsville, IN 47933
**Minor Source Modification:** 107-16768-00052
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HAPs - Organics

| | Benzene | Dichlorobenzene | Formaldehyde | Hexane | Toluene |
|---|---|---|---|---|---|
| Emission Factor in lb/MMcf | 0.0021 | 0.0012 | 0.0750 | 1.8000 | 0.0034 |
| Potential Emission in tons/yr | 2.44E-05 | 1.39E-05 | 8.71E-04 | 2.09E-02 | 3.95E-05 |

HAPs - Metals

| | Lead | Cadmium | Chromium | Manganese | Nickel | Total |
|---|---|---|---|---|---|---|
| Emission Factor in lb/MMcf | 0.0005 | 0.0011 | 0.0014 | 0.00038 | 0.0021 | HAPs |
| Potential Emission in tons/yr | 5.81E-06 | 1.28E-05 | 1.63E-05 | 4.41E-06 | 2.44E-05 | 0.022 |

Methodology is the same as page 2.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.